

# IELab Newsletter

## April 2017

### Issue 2

#### Dear IELab Community

It has been a while since we sent out the last IELab Newsletter, but now it's high time for an update. A number of things have happened in the last year in the IELab, mostly related to development in the background, which is why the changes were not necessarily visible to the end user. Read below about new and updated datafeeds and IELab Portal development to find out what happened.

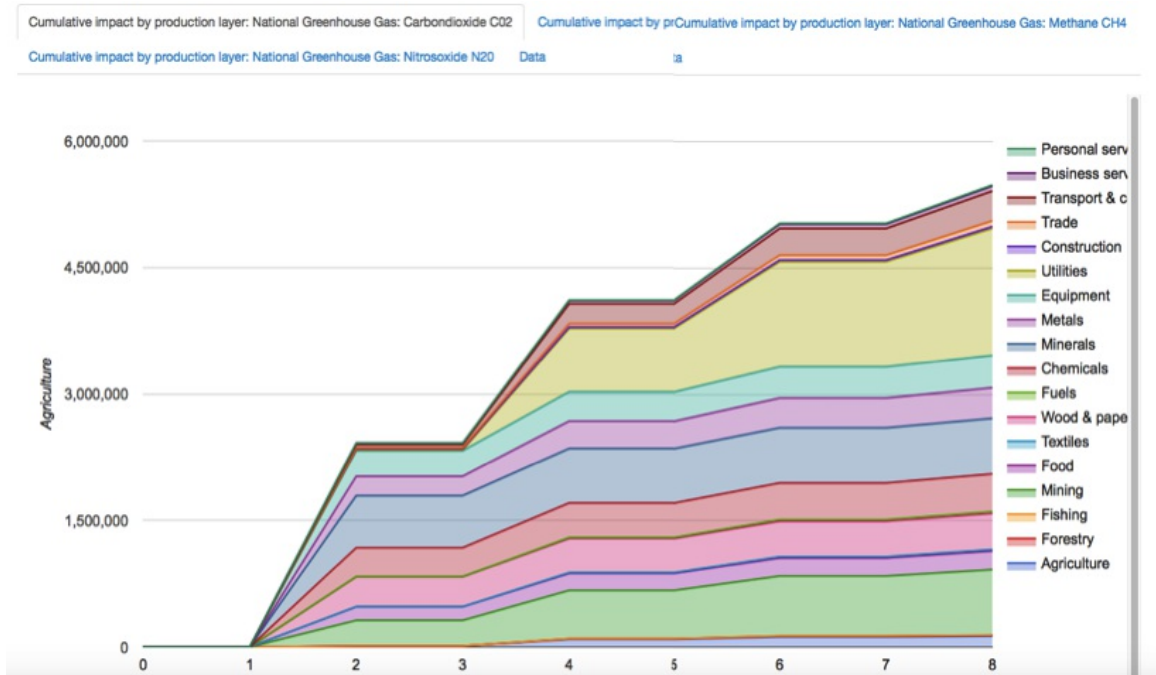
And it is also time for another IELab Conference! We are very pleased to announce that the second IELab Conference will take place in November this year and will be linked back-to-back to an ALCAS student event to foster collaboration between the two groups. Check out the exciting details below and block out the time in your calendars. This will be an event not to be missed!

We hope you enjoy reading this newsletter and we'd love to get your feedback through the IELab Forum on the Hub (<https://ielab.info/groups/forum/forum>).

Yours sincerely,  
The IELab Steering Committee

#### New developments on the IELab Portal

The IELab Portal is being developed with the non-expert user in mind. The possibility of conveniently creating multi-region supply-and-use tables (called 'base tables') with any of up to 1284 sectors, any of up to 2214 regions and a number of environmental extensions in a graphical user interface has been active for a while. More recently, the possibility of conducting a final demand analysis was added. Here, users can insert expenditure data on any chosen product or service to calculate the footprint (life cycle impacts) of these commodities. Outputs include total intensities, impacts, commodity breakdown, benchmark spider diagram and layer decomposition.



A number of demo videos was produced to provide a quick guide to base table creation and final demand analysis. Please find these videos on the IELab Hub under:  
<https://ielab.info/resources/teachingmaterials>

## IELab proves popular amongst Australian researchers - new paper summarises 30 studies

The Industrial Ecology Virtual Laboratory (IELab) is proving an increasingly popular research platform. The high-performance computing lab is used for compiling large-scale, high-resolution, enviro-socio-economic accounts for the purpose of conducting integrated sustainability assessment projects. These include, for example, assessments of bio-fuels and low-carbon construction materials or high-resolution waste modelling. A new paper published by IELab operational leader Tommy Wiedmann provides a structured review of 30 IELab applications that were published in either peer-reviewed journal papers or in the form of conference proceedings. He investigated whether the IELab has actually and truly enabled new research. A detailed analysis of IELab characteristics and their usage is presented. Two-thirds of the studies (20) would not have been possible without the IELab and a further six would have required considerable extra resources to complete. More details can be found in the article: Wiedmann, T. (2017) An input-output virtual laboratory in practice – survey of uptake, usage and applications of the first operational IELab. *Economic Systems Research*, 1-17. <http://dx.doi.org/10.1080/09535314.2017.1283295>

For those who don't have access to e-libraries, a free copy of the article can be obtained here (limited to 50 downloads): <http://www.tandfonline.com/eprint/FAQc6uePXx83xrQVquCu/full>

## IELab/ALCAS Conference 26-29 November 2017 – Save the date!

We are particularly pleased to announce that we will not only hold the **2nd IELab Conference in November 2017**, but that it will also be held in conjunction with the

ALCAS LCA Forum 2017!

**Please save the date and location for this event: 26-29 November 2017 at the UQ Research Station on Stradbroke Island.**

Details of the conference and a Call for Contributions will be circulated separately soon. No doubt, we will have a few days packed with exciting news, information, ideas and activities!

## **New multi-regional supply and use tables for Australia available on the IELab**

Within four months of the release of official national statistics, IELab researchers have produced a time-series (2008-2015) of balanced sub-national, multi-regional supply-and-use tables (MR-SUTs), integrated with a set of socio-economic and environmental accounts. In the accompanying publication\*), the researchers demonstrate the relevance of such purpose-built information to government and corporate decision-makers by analysing the indirect economic and employment consequences of a slowdown of the mining boom in Western Australia.

The novel MR-SUTs provide a great deal of new and timely information for decision-makers with an interest in integrated analysis of socio-economic and environmental factors. In particular, the data fill two major gaps – missing years in the time-series of national SUT published by the ABS; and sub-national SUT suitable for regional analysis, accompanied by inter-regional trade matrices. The demonstrated innovations in flexibility and timeliness will help move past some of the limitations that have historically hindered the uptake and utility of applied input-output analysis.

The MR-SUTs are freely available for download at <https://ielab.info/resources/91>

\*) Lenzen, M., Geschke, A., Malik, A., Fry, J., Lane, J., Wiedmann, T., Kenway, S., Hoang, K. and Cadogan-Cowper, A. (2017) New multi-regional input–output databases for Australia – enabling timely and flexible regional analysis. Economic Systems Research, Special Issue on Input-Output Virtual Laboratories.

<http://dx.doi.org/10.1080/09535314.2017.1315331>

## **IELab data available in Simapro – Partnership with lifecycles**

The LCA consultancy lifecycles and IELab recently partnered up to make carbon footprint intensity data from the IELab available in the Life Cycle Assessment specialist software Simapro. A model was built at lifecycles which will allow to update the Simapro database on a regular basis, as new IELab base tables and associated satellites are available. Currently, data for the year 2014 are being made available in Simapro. They comprise 1177 sectors and direct and total emission intensity data for eight greenhouse gasses. For further information please contact lifecycles on [info@lifecycles.com.au](mailto:info@lifecycles.com.au)

## **User fees for the IELab coming up**

Operating and maintaining the IELab is associated with considerable costs. So far, the managing teams at UNSW Sydney and the University of Sydney have managed to internalise these costs or compensate them with project funds. However, one urgent

upcoming expenditure will be a Matlab licence for the main IELab server at UNSW. The licence is essential to allow all users who are not covered by an institutional Matlab licence to fully access and participate in the IELab.

The Steering Committee has therefore decided that usage fees for the IELab be introduced in the first half of 2017. Fees will be kept to an absolute minimum (they are estimated to just about cover the costs for the Matlab licence) and the fee structure will be kept simple in order to minimise administrative overheads. From 1st June 2017 the following fees will apply:

- Individuals \$100 for one year
- Universities \$500 for one year for 1-5 users; then \$100/yr for each additional user
- Consultancies/companies \$2000 for one year, independent on the amount of usage

Invoices will be sent out shortly. **Researchers should please continue to include future IELab user fees in any funding proposals they prepare!**

## User photos



The IELab is faceless without your photo. Communication via the IELab Forum becomes much more human when members upload their photos. Please upload yours today on your IELab profile.

## IELab as a data platform for researchers

Are you planning your next research project? Are you advising research students considering their project or PhD options?

The comprehensive datasets and analytical tools from the IELab can give you a head start, providing access to data and allowing researchers to get straight into analysis, rather than spending time getting data from scratch or chasing permissions for existing datasets.

The 'big data' resources of the IELab are giving researchers and students access to the numbers they need to answer their research questions.

Check out the possibilities that IELab offers on <https://ielab.info/about/ielab>. Register on the website, contact us if you have specific questions or submit a ticket if you encounter a problem.

## Receiving the IELab Newsletter

If this newsletter was forwarded by someone else to you and you would like to receive it directly, then please register on the IELab Hub website here: <https://ielab.info>

Set the rules of your email account so that it allows emails from ...@ielab.info to avoid the newsletter going into your Junk folder.

\*) The IELab Steering Committee currently includes Tommy Wiedmann, Manfred Lenzen, Christopher Dey, Steven Kenway, Tim Baynes, Robert Crawford, Peter Daniels, Khanh Hoang and Michelle Barker.

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